

**ATV "Minimal" Television Station
Requirement for Equipment and Descriptions**

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¹ Requirement for each Unit indicated by: X = Required, O = Optional, N = Not Needed

ATV "Minimal" Television Station Equipment Functional Descriptions

NOTE: Assumes minimum facilitation that can permit ATV broadcasting. Expected interface is fully compressed ATV signal. Station operations may be constrained by such choices.

Unit #	Description
1	Satellite Receiver & Demodulator - Delivers fully ATV compressed signal from satellite ready for transmission without further source coding. Provides any error correction required to compensate the satellite link.
2	Customer Premises Equipment for Common Carrier connection removes any bits added (stuffed) at the transmission point to match the common carrier data rate. Delivers fully ATV compressed signal ready for transmission without further source coding.
5	Encoded Record/Play VTR - Provided as option for Independent & Public stations for time shifting programs. Records & plays fully compressed signals without any "trick" modes.
6	NTSC Upconverter - Decodes NTSC input signals to components & converts raster structure to that required for ATV encoder. (Encoder may be combined into same piece of equipment.)
7	ATV Routing - Permits distribution & switching of signals around facility. Delivers multiple signals to ATV Master Control for clean on-air switching. May be as simple as a patch panel. May be an electronic switch.
8	Existing NTSC Routing Switcher - Used to distribute & switch signals in the existing NTSC plant. In a facility using the "minimal" approach, likely to be analog encoded NTSC.
10	ATV Monitoring - Provides picture monitoring for signals distributed internally, for Master Control output, and for off-the-air signals.
11	ATV Master Control - Provides basic clean switching of on-air signals. No effects (wipes, dissolves, keys, etc.) expected. Control may be linked to NTSC Master Control switcher.
12	Existing NTSC Master Control - Provides on-air continuity switching of NTSC signals for existing station. Uses analog encoded NTSC. May provide automated control for ATV Master Control switcher.

13	ATV Off-Air Monitoring - Provides off-air reception & demodulation of ATV signals for remote control purposes. Includes special test equipment necessary to maintain & certify proper transmitter operation. Picture monitoring handled by ATV Monitoring block.
14	ATV Encoder - Encodes upconverted NTSC signals. May optionally be reduced-complexity unit based upon exclusive handling of NTSC originated material. May be integrated with NTSC upconverter.
15	NTSC Compressor - Optional device to permit combination of NTSC signal with ATV signal for transmission over single Studio-to-Transmitter Link (STL).
16	Multiplexer - Optional unit to combine compressed ATV and compressed NTSC signals into single signal for STL transmission.
17	STL Transmitter - Microwave transmitter for either compressed ATV signal alone or combined compressed ATV & NTSC signals.
18	Transmit Dish Antenna for Microwave STL
19	Receive Dish Antenna for Microwave STL
20	STL Receiver - Microwave receiver for either compressed ATV signal alone or combined compressed ATV & NTSC signals.
21	Demultiplexer - Optional unit to separate multiplexed compressed ATV and NTSC signals into individual signals after STL transmission.
22	ATV Re-formatter - Converts compressed ATV signal from form used for STL transmission to form needed to modulate ATV broadcast transmitter.
23	ATV Modulator/Exciter - Generates modulated ATV signal and converts to broadcast channel frequency for input to transmitter.
24	ATV Transmitter - High power amplifier for on-channel signals from exciter.
25	ATV Transmitter Monitoring - Combines necessary RF conversion, demodulation, decoding, picture monitoring, and special test equipment for certification & maintenance of proper transmitter operation.
26	ATV Broadcast Antenna